

Please add the following new claims:

21. (New) A nozzle for a burner, said nozzle comprising:

a body having a first end adapted to attach to the burner and a second end, said first end having plurality of inlet holes and said second end having a plurality of outlet holes, each inlet hole being connected to a single outlet hole by a separate tube,

wherein at least one of said separate tubes includes a first linear section connected to one of said inlet holes and a second linear section connected to one of said outlet holes, said second linear section being provided at a predetermined angle in relation to said first linear section.

22. (New) The nozzle according to Claim 15, wherein another of said separate tubes is linear along an entire length thereof.

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-5, and 9-22 are presently active in this case, Claims 1, 5, 9, 13, and 19 having been amended, Claims 6-8 have been canceled, and Claims 21 and 22 have been added by way of the present Amendment.

In the outstanding Official Action, Claim 5 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 has been amended to clarify that the first and third tubes have an angle of dispersion in a range from about 7 degrees to about 15 degrees, and the second tube has an angle of dispersion of about zero degrees.

Accordingly, the Applicant requests the withdrawal of the indefiniteness rejections.

Claims 8, 9, 15, and 16 were indicated as containing allowable subject matter. The subject matter of Claim 8 has been incorporated into Claim 1. Accordingly, the Applicant submits that Claim 1 is allowable, and Claims 2-5 and 9-12 are allowable as being dependent upon allowable Claim 1. Claim 15 has been rewritten in independent form as new Claim 21. Accordingly, the Applicant submits that new Claim 21 is allowable, and Claim 22 is allowable as being dependent upon allowable Claim 21.

Claims 1-4, 6, 7, 11-14, and 17-19 were rejected under 35 U.S.C. 102(b) as being anticipated by Martin (U.S. Patent No. 5,401,167). Claims 13, 14, 19, and 20 were rejected under 35 U.S.C. 102(b) as being anticipated by Singh (U.S. Patent No. 5,174,744). Claims 5 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Martin. For the reasons discussed below, the Applicant respectfully requests the withdrawal of the art rejections.

The art rejections of Claims 1-7 and 10-12 are rendered moot based upon the incorporation of the allowable subject matter of Claim 8 into independent Claim 1, and the cancellation of Claims 6-8.

Claim 13 of the present application recites a nozzle for a burner including a body having a first end adapted to attach to the burner and a second end. The first end has a plurality of inlet holes and the second end has a plurality of outlet holes. Each inlet hole is connected to a single outlet hole by a separate tube, and all of the separate tubes in the body extend along a common plane.

Claim 19 of the present application recites a nozzle for a burner including a body having a first end adapted to attach to the burner and a second end. The body has a plurality of separate tubes extending therethrough. The plurality of separate tubes each have an inlet

hole on the first end and an outlet hole on the second end, and all of the plurality of separate tubes in the body extend along a common plane.

The Applicant submits that neither the Martin reference nor the Singh reference disclose or suggest a nozzle for a burner including a body having separate tubes where all of the separate tubes in the body extend along a common plane, as recited in Claim 13 of the present application. Furthermore, the Applicant submits that neither the Martin reference nor the Singh reference disclose or suggest a nozzle for a burner including a body having a plurality of separate tubes where all of the plurality of separate tubes in the body extend along a common plane, as recited in Claim 19 of the present application. Accordingly, the Applicant submits that the Martin and Singh references neither anticipate, nor render obvious Claims 13 and 19 of the present application.

The Martin reference describes a gas burner particularly intended to produce diffusion flames of good emissivity and luminosity in an industrial furnace. The burner has a plate (26) forming a burner nozzle having a central through first bore (28) surrounded by a circular array of six smaller diameter second bores. One of the second bores (34) is parallel with the axis of the central first bore. Whereas the other five second bores (32) are each respectively disposed at an acute angle of substantially 22.5° to the axis of the central bore.

As can be seen clearly in Figures 3 and 4, the bores (28, 32, 34) of the Martin reference do not all extend along a common plane. In fact, the bores (32, 34) are arranged in a generally circular configuration around bore (28). To the contrary Claims 13 and 19 of the present invention recite that all of the separate tubes that extend through the body of the nozzle extend along a common plane. The present application describes a non-limiting embodiment including a flat flame burner nozzle, as depicted in Figures 1-3. The flat flame burner nozzle includes a body having a first tube 30, a second tube 40, and a third tube 50

that all extend along a common plane through the body, as can be clearly seen in Figures 1 and 2. The Martin reference does not disclose or suggest such a configuration, and therefore does not anticipate Claims 13 and 19.

The Singh reference describes an industrial burner with low NO_x and CO emissions. The burner includes a box-like housing (11) with an elongated cast iron burner nozzle (13) disposed within the housing (11). Natural gas or other fuel under pressure is supplied under pressure through the Line (14) to a fuel chamber (17) in the nozzle (13). Fuel from the chamber (17) is discharged to the forward face of the nozzle by means of upper and lower rows of laterally spaced fuel passages (18, 19). Combustion air from the blower (15) is directed through upper and lower rows of laterally spaced main combustion air passages (20 and 21). As can clearly be seen in Figure 1, the various passages (18, 19, 20, 21) do not extend along a common plane, but rather the passages (18, 19, 20, 21) are distributed in various rows across the nozzle (13). To the contrary Claims 13 and 19 of the present invention recite that all of the separate tubes that extend through the body of the nozzle extend along a common plane. The Singh reference does not disclose or suggest such a configuration, and therefore does not anticipate Claims 13 and 19.

Claims 14-18 and 20 are considered allowable for the reasons advanced for Claims 13 and 19 from which they depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed, taught, nor suggested by the applied references when those features are considered within the context of Claims 13 and 19.

Accordingly, the Applicant respectfully requests the withdrawal of the art rejections.

Consequently, in view of the above discussion, it is respectfully submitted that the pending claims are patentably distinguishing over the cited art. The present application is

therefore believed to be in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Attorney of Record
Registration No. 25,599
Christopher D. Ward
Registration No. 41,367



22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OSMMN 10/00)

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IN THE CLAIMS

1. (Once Amended) A nozzle for a burner, said nozzle comprising:
a body having a first end adapted to attach to the burner and a second end;
a first tube extending through said body, said first tube having a first inlet on said first end of said body and a first outlet on said second end of said body; and
a second tube extending through said body, said second tube having a second inlet on said first end of said body and a second outlet on said second end of said body,
wherein said first tube and said second tube are separate along a substantial length of said body, and

wherein said first tube includes a first linear section connected to said first inlet and a second linear section connected to said first outlet, said second linear section being provided at a predetermined angle in relation to said first linear section.

5. (Once Amended) The nozzle according to Claim 3, wherein said first tube and said [second] third tube each have an angle of dispersion in a range from about 7 degrees to about 15 degrees, and wherein said second tube has an angle of dispersion of about zero degrees.

6. (Cancel)

7. (Cancel)

8. (Cancel)

9. (Once Amended) The nozzle according to Claim [8] 1, wherein said second tube is linear along an entire length thereof.

13. (Once Amended) A nozzle for a burner, said nozzle comprising:

a body having a first end adapted to attach to the burner and a second end, said first end having a plurality of inlet holes and said second end having a plurality of outlet holes, each inlet hole being connected to a single outlet hole by a separate tube, wherein all of said separate tubes in said body extend along a common plane.

19. (Once Amended) A nozzle for a burner, said nozzle comprising:

a body having a first end adapted to attach to the burner and a second end, said body having a plurality of separate tubes extending therethrough, said plurality of separate tubes each having an inlet hole on said first end and an outlet hole on said second end, wherein all of said plurality of separate tubes in said body extend along a common plane.

21. (New)

22. (New)